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BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/844,856

Applicant(s)

GARCIA-LUNA-ACEVES ET AL.

Examiner

Dohm Chankong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/11/2005, 9/21/2006</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1> This action is in response to Applicant's request for continued examination, filed 9.21.2006. Claims 1, 3-9 and 11-14 are presented for further examination.

2> This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9.21.2006 has been entered.

Response to Arguments

4> Applicant's arguments with respect to claims 1, 3-9 and 11-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5> Claims 1, 3-9 and 11 are rejected under 35 U.S.C § 102(e) as being anticipated by McCanne et al, U.S Patent No. 6,785,704 ["McCanne.2"], in view of Partridge et al, "Host Anycasting Service" ["Partridge"].

6> Partridge was cited by Applicant in the IDS filed 10.31.2006.

7> As to claim 1, McCanne.2 discloses a method, comprising:

receiving, at an information object repository, a request for an information object at an address identified by a uniform resource locator (URL) [column 23 «lines 14-17» | column 25 «lines 57-66» where : McCanne.2's cache corresponds to a repository]; and

mapping the URL to a corresponding anycast address for the information object [column 23 «lines 14-17 and 56-60» | column 26 «lines 25-27» where : the cache resolves the URL to an anycast address for the web servers that have the requested content].

resolving the anycast address for the information object to a unicast address for the information object [column 21 «lines 9-16» | column 23 «lines 54-67»]; and

obtaining a copy of the information object at the corresponding unicast address [column 23 «lines 54-67»].

McCanne.2, however, does not expressly disclose the resolving of the anycast address comprising sending an anycast resolution query to the anycast address according to an anycast resolution protocol.

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8> Partridge is directed towards an internet anycasting service for IP [pg. 1, abstract].
Bhattacharjee discloses a DNS resolver resolving an anycast address by sending a request (query) to the anycast address [pg. 2, ¶1 : “DNS resolvers...could send a query to a well known DNS anycast address | pg. 3, ¶2 : “...send DNS queries to the DNS anycast address”].

It would have been obvious to one of ordinary skill in the art to incorporate Partridge’s anycast address protocol into McCanne’s anycast system. Partridge’s teachings provide would improve McCanne’s system by enabling DNS resolvers to properly resolve anycast addresses by sending queries to anycast addresses.

9> As to claim 3, McCanne.2 discloses the method of claim 1 further comprising sending the information object to the client [column 23 «lines 14-23 and 54-63»].

10> As to claim 4, McCanne.2 discloses the method of claim 3 wherein the request is received at an information object repository that is topologically closer to the client than any other information object repository [column 13 «line 45»].

11> As to claim 5, McCanne.2 discloses the method of claim 4 wherein the information object repository is selected according to specified performance metrics [column 21 «lines 58-62»].

12> As to claim 6, McCanne.2 discloses the method of claim 5 wherein the performance metrics comprise one or more of: average delay from the selected information object

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repository to a source of the request, average processing delay at the selected information object repository, reliability of a path from the selected information object repository, available bandwidth in said path, and loads on the selected information object repository [column 21 «lines 58-62»].

13> As to claim 7, as it does not teach or further define over the previously claimed limitations, it is similarly rejected for at least the same reasons set forth for claim 1.

14> As to claim 8, McCanne.2 discloses the information object repository of claim 8 being further configured to advertise the anycast address using a network layer anycast routing protocol [column 15 «lines 9-14»].

15> Claim 9 is a claim to for a network with elements that perform the steps of the method of claim 1. Therefore, claim 9 is rejected for the same reasons as set forth for claim 1, *supra*.

16> Claim 11 is a claim for a network with an element that performs the step of the method of claim 4. Therefore, claim 11 is rejected for the same reasons as set forth for claim 4, *supra*.

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17> Claims 1, 3-9 and 11 are rejected under 35 U.S.C § 102(e) as being anticipated by McCanne.2, in view of Bhattacharjee et al, "Application-Layer Anycasting" ["Bhattacharjee"].

18> Bhattacharjee was cited in by Applicant in the IDS filed 10.31.2006.

19> As to claim 1, McCanne.2 discloses a method, comprising:

receiving, at an information object repository, a request for an information object at an address identified by a uniform resource locator (URL) [column 23 «lines 14-17» | column 25 «lines 57-66» where : McCanne.2's cache corresponds to a repository]; and

mapping the URL to a corresponding anycast address for the information object [column 23 «lines 14-17 and 56-60» | column 26 «lines 25-27» where : the cache resolves the URL to an anycast address for the web servers that have the requested content].

resolving the anycast address for the information object to a unicast address for the information object [column 21 «lines 9-16» | column 23 «lines 54-67»]; and

obtaining a copy of the information object at the corresponding unicast address [column 23 «lines 54-67»].

McCanne.2, however, does not expressly disclose the resolving of the anycast address comprising sending an anycast resolution query to the anycast address according to an anycast resolution protocol.

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20> Bhattacharjee is directed towards an anycasting communication paradigm [abstract].

Bhattacharjee discloses resolving an anycast address by sending a request (query) to the anycast address [Figure 1 (pg. 1389) | Figure 2 (pg 1391) where : the anycast domain name is analogous to claimed anycast address], which is correlated to a unicast address [Figure 1 | Figure 2 | Section 4.2 “Filter Specification” – “ADN to IP address mapping” where : the anycast address query returns an IP address to the client]. Since Bhattacharjee’s anycast address query|response functionality resolves the anycast address to a corresponding IP address, Bhattacharjee’s functionality is analogous to an anycast address resolution protocol.

It would have been obvious to one of ordinary skill in the art to incorporate Bhattacharjee’s anycast address protocol into McCanne’s anycast system. Bhattacharjee’s teachings provide would improve McCanne’s system by achieving proper anycast address resolution [see Bhattacharjee, pg. 1391, section 4 “Interacting with Anycast Resolvers”].

21> As to claims 3-9 and 11, see above.

22> Claims 1, 3-9, and 11-14 are rejected under 35 U.S.C § 103(a) as being unpatentable over McCanne et al, U.S Patent No. 6,415,323 [“McCanne”], in view of McCanne.2, in further view of Bhattacharjee.

23> As to claim 1, McCanne discloses a method, comprising:

receiving, at an information object repository, a request for an information object at an address identified by a uniform resource locator (URL) [column 15 <lines 59-60>];

mapping the URL to a corresponding anycast address for the information object
[column 15 <lines 59-65>];

resolving the anycast address for the information object to a unicast address for the
information object [column 10 <lines 36-43> and column 16 <lines 9-12 and 27-29>];

McCanne discloses that the repository is enabled to directly service the client request
[column 14 <lines 31-32>] but does not expressly disclose that the repository obtains the
information object at the corresponding unicast address. McCanne also does not expressly
disclose the resolving of the anycast address comprising sending an anycast resolution query
to the anycast address according to an anycast resolution protocol [see rejection of claim 1
under McCanne.2, in view of Bhattacharjee].

24> McCanne.2 is directed towards a content distribution system and specifically moving
data streams from content producers to requesters of those streams. McCanne further
discloses an information object repository that is enabled to directly obtain a copy of an
information object at a corresponding unicast address [column 23 <lines 14-23 and 48-67>].

McCanne.2's cache corresponds to an information object repository, that interprets the URL
request for an information object and subsequently retrieves the object from a particular Web
server if the object is not currently located in the cache. It would have been obvious to one of
ordinary skill in the art to modify McCanne with McCanne.2's enhanced repository
capabilities. As discussed McCanne does disclose that the repository is capable of directly
servicing client requests but was silent as to the functionality of such a capability.

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McCanne.2 clearly provides a teaching of such functionality that would enable McCanne's repository to directly retrieve requested information objects from a server.

25> As to claim 3, McCanne discloses the method of claim 1 further comprising sending the information object to the client [column 16 <lines 9-12>].

26> As to claim 4, McCanne discloses the method of claim 3 wherein the request is received at an information object repository that is topologically closer to the client than any other information object repository [claim 10 where: the nodes in the anycast group are equivalent to an information object repository].

27> As to claim 5, McCanne discloses the method of claim 4 wherein the information object repository is selected according to specified performance metrics [column 17 <lines 48-58 and claim 8>].

28> As to claim 6, McCanne discloses the method of claim 5 wherein the performance metrics comprise one or more of: average delay from the selected information object repository to a source of the request, average processing delay at the selected information object repository, reliability of a path from the selected information object repository, available bandwidth in said path, and loads on the selected information object repository [column 17 <lines 48-58> and claim 8].

29> As to claim 7, as it does not teach or further define over the previously claimed limitations, it is similarly rejected for at least the same reasons set forth for claim 1.

30> As to claim 8, McCanne discloses the information object repository of claim 8 being further configured to advertise the anycast address using a network layer anycast routing protocol [column 12 <lines 44-54> and column 20 <lines 40-52>].

31> Claim 9 is a claim to for a network with elements that perform the steps of the method of claim 1. Therefore, claim 9 is rejected for the same reasons as set forth for claim 1, *supra*.

32> Claim 11 is a claim for a network with an element that performs the step of the method of claim 4. Therefore, claim 11 is rejected for the same reasons as set forth for claim 4, *supra*.

33> As to claim 12, McCanne discloses the network of claim 11 further comprising a Web router configured to select the information object repository that is closer to the requesting client than any other of the number of information repositories in the network without regard as to whether the information object is actually stored at the selected information object repository [column 19 <lines 14-26> and column 20 <lines 55-58>].

34> Claim 13 is a claim for a network with an element that performs the step of the method of claim 5. Therefore, claim 13 is rejected for the same reasons as set forth for claim 5.

35> Claim 14 is a claim for a network with an element that performs the step of the method of claim 6. Therefore, claim 14 is rejected for at least the same reasons set forth for claim 6.

36> Claims 1, 3-9, and 11-14 are rejected under 35 U.S.C § 103(a) as being unpatentable over McCanne et al, U.S Patent No. 6,415,323 ["McCanne"], in view of Yamano et al, U.S Patent No. 6,314,088 ["Yamano"], in further view of Bhattacharjee.

37> As to claim 1, McCanne discloses a method, comprising:

receiving, at an information object repository, a request for an information object at an address identified by a uniform resource locator (URL) [column 15 <lines 59-60>;

mapping the URL to a corresponding anycast address for the information object [column 15 <lines 59-65>;

resolving the anycast address for the information object to a unicast address for the information object [column 10 <lines 36-43> and column 16 <lines 9-12 and 27-29>;

McCanne discloses that the repository is enabled to directly service the client request [column 14 <lines 31-32>] but does not expressly disclose that the repository obtains the information object at the corresponding unicast address. McCanne also does not expressly disclose the resolving of the anycast address comprising sending an anycast resolution query to the anycast address according to an anycast resolution protocol [see rejection of claim 1 as being unpatentable over McCanne.2, in view of Bhattacharjee].

38> Yamano discloses an information object repository that is enabled to directly obtain a copy of an information object at a corresponding unicast address [Figure 5 | column 5 «line 64» to column 6 «line 14»]. Yamano's server corresponds to an information object repository, that interprets the client's request for an information object and subsequently retrieves the object from a particular Web server if the object is not currently located in the originally contacted server by obtaining the ATM (unicast) address of the server. It would have been obvious to one of ordinary skill in the art to modify McCanne with Yamano's enhanced server capabilities. As discussed McCanne does disclose that his repository is capable of directly servicing client requests but was silent as to the functionality of such a capability. Yamano clearly provides a teaching of such functionality that would enable McCanne's repository to directly retrieve requested information objects from a server. Further, Yamano is directed at improving current anycast techniques for obtaining information [column 1 «lines 31-37»].

39> As to claims 3-9 and 11-14, see claim rejections above.

Conclusion

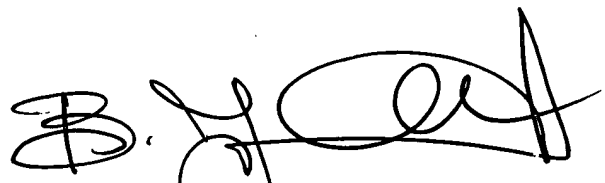
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Tuesday-Friday [7:30 AM to 4:30 PM].

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC



BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER